Deutsche Institute für Textil- und Faserforschung (DITF)

The DITF is a research facility and deals with the production of carbon and oxide fibers, among other things.

The German Institutes of Textile and Fiber Research in Denkendorf are Europe's largest textile research center. At the research center, a wide variety of issues along the entire fiber and textile manufacturing chain can be addressed using state-of-the-art technologies on an area of more than 25,000 m2. For a long time now, the focus has not only been on apparel textiles, but to a large extent on technical applications of fiber-based textile structures. This means that nowadays applied research and development, like the one carried out in Denkendorf, forms the basis for various enabling technologies in which fibers and textiles play a decisive role.

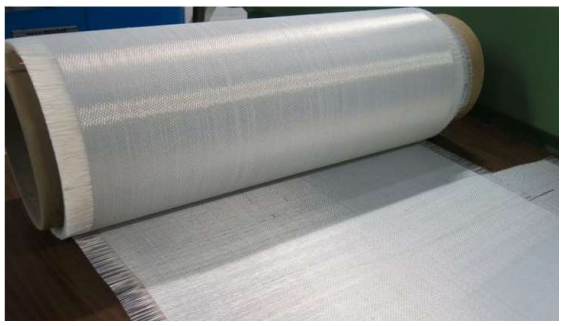
For more than 30 years, continuous research has been conducted at the DITF on the development of oxide ceramic fibers, which are the crucial component in fiber-reinforced ceramics, so-called CMC.

Burner nozzle made of OxCeFi fibers @ DITF

In terms of developments and technological status in the field of oxide ceramic fibers, the DITF occupies a leading position worldwide and these activities constitute a unique feature in the landscape of textile research institutions in Europe.

Research activities focus on the production of alumina- and mullite-based high-performance ceramic fibers, with the emphasis on material development on the one hand and the development of a manufacturing process suitable for industrial use on the other.

The OxCeFi fibers developed in Denkendorf already achieve the properties of



Woven fabric made from OxCeFi A99 fibers @ DITF

the best commercially available oxide fibers. The research strategy aims to develop ceramic fibers based on new compositions and with improved and extended property profiles in order to pass this know-how on to industrial

OxCeFi fiber weaving @ DITF

OxCeFi A99 Aluminium Oxide fibers @ DITF

partners. In the meantime, there is close cooperation with an industrial company that would like to produce the DITF fibers commercially.